



# THE IMPACT OF THE COVID-19 PANDEMIC ON VACCINE HESITANCY: CAUSES AND CONSEQUENCES

Samhitha Kolapalli

Impact and Research Fellowship, Harvard Student Agencies, In collaboration with Learn with Leaders

## ABSTRACT

This research paper contains information on the relationship between the COVID-19 pandemic and the rise in vaccine reluctance. To conduct this research, a variety of peer-reviewed journal articles and sources from highly reputable authors were used, and qualitative data was used to inform the analysis and discussion. Understanding this relationship is crucial for mitigating the spread of deadly diseases in the future. The research identifies three primary factors contributing to the rise in vaccine reluctance: (i) the rapid development of vaccines; (ii) concerns about side effects; and (iii) a lack of access. Insights from this study can help scientists, researchers, and doctors develop better strategies for vaccine deployment, ensuring a more positive public response.

**KEYWORDS:** Vaccine Hesitancy, COVID-19 Pandemic, Public Health, Vaccine Accessibility, Misinformation, Immunization Rates

## INTRODUCTION

The coronavirus, also known as COVID-19, was considered a deadly pandemic worldwide. The virus spreads through tiny viral particles, which enter the body through the eyes, nose, or mouth. It is also possible to contract COVID-19 on contaminated surfaces. Once infected, individuals can experience various symptoms, including fever, chills, cough, shortness of breath, difficulty breathing, fatigue, muscle or body aches, and loss of taste and smell.

COVID-19 began in China in late 2019 and quickly spread worldwide. Schools and businesses in the United States were shut down, and many citizens were instructed to stay home and quarantine. Despite these measures, 108 million Americans contracted COVID-19, and 1 million Americans died from it (Worldometer, 2021). In response, scientists rapidly developed vaccines to help society return to normalcy. However, once these vaccines were available, 33% of Americans chose not to receive them (O'Keefe, 2021). This reluctance, fueled by concerns over rapid development, potential side effects, and access issues, further prolonged the pandemic and increased the death toll.

## METHODOLOGY

This study employs a qualitative analysis of secondary sources to explore the relationship between the COVID-19 pandemic and the rise in vaccine hesitancy. Data were gathered from peer-reviewed journal articles, government reports, and credible online resources. The analysis focuses on identifying the primary factors contributing to vaccine reluctance, such as rapid vaccine development, concerns about side effects, and accessibility issues. Additionally, the study examines the influence of misinformation spread through social media and its impact on public trust in vaccines. By synthesizing these sources, the study aims to provide a comprehensive

understanding of how the pandemic has shaped public attitudes toward vaccination and the broader implications for public health policy.

## RESULTS

There were two main vaccines created for COVID-19: Pfizer and Moderna. "The FDA approved the Pfizer vaccine just 13 months after the start of the pandemic (Leggett, 2022)." Due to this fast-paced timeline, many Americans did not feel confident and comfortable in taking the vaccine. Many felt that it needed more testing before it was put out on the market. However, COVID-19 has been experimented with for years. An article written in September 2021 on AARP.org states: "The virus that causes COVID-19 is related to other coronaviruses that have been under the microscope for years, including those that cause severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS). The technology that was used in the Pfizer and Moderna vaccines has been undergoing testing for almost a decade. Therefore, scientists and the FDA were able to quickly get the vaccine out for citizens; even though it seemed like it had only been one year into production." After two years of it being on the market, scientists are certain it helps save lives and prevent hospitalizations.

Furthermore, throughout the pandemic, many citizens started creating conspiracy theories. These theories were then spread across the internet using platforms like Facebook and TikTok. Since everyone was at home and quarantining during this time, people believed conducting extensive online research would make them experts in the field. Some of these conspiracy theories include "the government is poisoning us" or "the vaccine causes infertility." However, there has been no scientific evidence to support these claims. The side effects have been normal compared to other autoimmune vaccines as well.

Lastly, the vaccine was not readily available in every part of the United States. Vaccine access has increased more than ever before since the government is creating more vaccines than each state needs. "COVID-19 shots and boosters are so abundant that walk-ins at pharmacies and grocery stores are available (Leggett, 2022)."

However, there are still many problems to overcome before the United States of America can fully make vaccine access available. For example, some citizens may not be able to find the means necessary to travel to a pharmacy due to lower income, family needs, or poor job flexibility. Due to these restrictions, some citizens cannot take days off after recovering from the vaccine. However, researchers and directors are exploring solutions to make the vaccine more accessible to everyone.

## DISCUSSION

Since citizens were less likely to take the vaccine, it had a major negative impact on the average health of the United States of America. This has been the case in a different disease outbreak: measles. In many states, a rise in measles occurred due to the decrease in vaccines. This is a large problem, as it shows that an already cured disease is coming back to affect citizens' health. Furthermore, measles has been proven to be extremely contagious, meaning that 90% of unvaccinated people contract the virus since it is airborne and spreads through the body quickly. Therefore, even if people are not getting vaccinated, it is still a highly contagious disease that is dangerous to all immune systems. Everyone must become vaccinated against all diseases to protect their well-being.

Similarly, of the 300 million people who have contracted COVID-19 in the United States of America, 61 million of those citizens were not vaccinated (US Census Bureau, 2021). According to USA Today, the largest sustained decline in childhood vaccinations in approximately 30 years has been recorded in official data published by WHO and UNICEF. Even though DTP and TDAP shots are routine and done annually by millions of families, a staggering 25 million children missed out on one or more doses of DTP through routine immunization services in 2021 alone. This is 2 million more than those who missed out in 2020 and 6 million more than in 2019. This demonstrates the large impact that COVID-19 had on vaccine reluctance (WHO, 2020). There are a large number of children at risk from devastating but preventable diseases. This decline was due to many factors, including children living in areas where there is less vaccine access, conspiracy theories, and the timeline at which the COVID-19 vaccine was created. "This is a red alert for child health. We are witnessing the largest sustained drop in childhood immunization in a generation. The consequences will be measured in lives," said Catherine Russell, UNICEF Executive Director. "While a pandemic hangover was expected last year as a result of COVID-19 disruptions and lockdowns, what we are seeing now is a continued decline. COVID-19 is not an excuse." If this does not occur, more children will become sick and hurt our healthcare system. For example, there are not enough beds and resources in hospitals. This is important to keep millions of children and families safe and healthy.

"Many countries now face declining immunization rates as a result of anti-vaccine activists. In the case of the USA, an anti-vaccine movement that began with false assertions linking vaccines to autism accelerated roughly a decade ago in Texas. At present, many elected leaders in the US House of Representatives actively promote this health freedom anti-vaccine agenda, as do several US senators, sitting governors, and federal judges (Benoit, 2021)." Even political leaders are saying no to vaccines; this in turn influences their followers and other citizens who are not extremely confident about the vaccines.

Anti-vaccine videos and memes have been coursing through social media, leading to decreased public trust in vaccine efficacy. The African Centres for Disease Control and Prevention (CDC) reported high vaccine reluctance through those that retrieve information from the internet, causing a large impact on American COVID-19 anti-vaccine activism. Additionally, it has affected other countries' opinions, knowledge about different diseases, and opinions on vaccines. This is a major problem, as many resolved outbreaks can come back and start again.

## CONCLUSION

Due to the vaccine reluctance of the COVID-19 pandemic, many citizens of the United States of America are reluctant to take any vaccines necessary for survival. The pandemic moved the USA backward in terms of anti-vaccine activism, as fewer and fewer people are taking vaccines. To protect the country's health, the public needs to focus on increasing the number of people open to taking the vaccine. To safeguard the health of future generations, it is vital that the current one responsibly increases the rate of vaccination. Increasing accessibility by establishing vaccination clinics in underserved areas and providing transportation options for those in need, collaborating with community leaders and influencers to promote positive vaccine messages, and addressing local concerns, implementing public education campaigns to debunk myths about vaccines and highlight their safety and efficacy, and providing incentives, like paid time off for vaccination and recovery, are crucial steps to achieving this goal.

## REFERENCES

1. Benoit, Staci L, and Rachel F. Mauldin. "The "Anti-Vax" Movement: A Quantitative Report on Vaccine Beliefs and Knowledge across Social Media." *BMC Public Health*, vol. 21, no. 1, 17 Nov. 2021, [bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-021-12114-8](https://doi.org/10.1186/s12889-021-12114-8), <https://doi.org/10.1186/s12889-021-12114-8>.
2. CDC. "Vaccines and Immunizations." *Cdc.gov*, 2019, [www.cdc.gov/vaccines/](http://www.cdc.gov/vaccines/).
3. US Census Bureau. "Household Pulse Survey Shows Many Don't Trust COVID Vaccine, Worry about Side Effects." *Census.gov*, 28 Dec. 2021, [www.census.gov/library/stories/2021/12/who-are-the-adults-not-vaccinated-against-covid.html](http://www.census.gov/library/stories/2021/12/who-are-the-adults-not-vaccinated-against-covid.html).
4. Worldometer. "United States Coronavirus." *Www.worldometers.info*, 2021, [www.worldometers.info/coronavirus/country/us/](http://www.worldometers.info/coronavirus/country/us/).
5. Ransing, Ramdas, et al. "COVID-19 Anti-Vaccine Movement and Mental Health: Challenges and the Way Forward." *Asian Journal of Psychiatry*, vol. 58, Apr. 2021, p. 102614, <https://doi.org/10.1016/j.ajp.2021.102614>.

6. Leggett, Page. "7 Reasons People Don't Get Vaccinated against COVID-19." Novant Health | Healthy Headlines, 13 Jan. 2022, [www.novanthealth.org/healthy-headlines/7-reasons-people-dont-get-vaccinated-against-covid-19](http://www.novanthealth.org/healthy-headlines/7-reasons-people-dont-get-vaccinated-against-covid-19).
7. FDA. "FDA Approves First COVID-19 Vaccine." FDA, 23 Aug. 2021, [www.fda.gov/news-events/press-announcements/fda-approves-first-covid-19-vaccine](http://www.fda.gov/news-events/press-announcements/fda-approves-first-covid-19-vaccine).
8. "In Focus: Sustainable Development Goal 5." UN Women – Headquarters, 23 Aug. 2022, [www.unwomen.org/en/news-stories/in-focus/2022/08/in-focus-sustainable-development-goal-5?gclid=CjwKCAjw-KipBhBtEiwAWjgwrI4kinPeIWnPOapJhg\\_ImegjiKwMr-uaefMMCu84STZP\\_skDLZgAgBoCnWoQAvD\\_BwE](http://www.unwomen.org/en/news-stories/in-focus/2022/08/in-focus-sustainable-development-goal-5?gclid=CjwKCAjw-KipBhBtEiwAWjgwrI4kinPeIWnPOapJhg_ImegjiKwMr-uaefMMCu84STZP_skDLZgAgBoCnWoQAvD_BwE). Accessed 14 Oct. 2023
9. O'Keefe, Shannon Mullen. "One in Three Americans Would Not Get COVID-19 Vaccine." Gallup.Com, Gallup, 29 Nov. 2022, [news.gallup.com/poll/317018/one-three-americans-not-covid-vaccine.aspx](https://news.gallup.com/poll/317018/one-three-americans-not-covid-vaccine.aspx). Accessed 15 Oct. 2023
10. WHO. "Modes of Transmission of Virus Causing COVID-19: Implications for IPC Precaution Recommendations." Wwww.who.int, 29 Mar. 2020, [www.who.int/news-room/commentaries/detail/modes-of-transmission-of-virus-causing-covid-19-implications-for-ipc-precaution-recommendations](http://www.who.int/news-room/commentaries/detail/modes-of-transmission-of-virus-causing-covid-19-implications-for-ipc-precaution-recommendations)
11. "Modes of Transmission of Virus Causing COVID-19: Implications for IPC Precaution Recommendations." Wwww.who.int, 29 Mar. 2020, [www.who.int/news-room/commentaries/detail/modes-of-transmission-of-virus-causing-covid-19-implications-for-ipc-precaution-recommendations](http://www.who.int/news-room/commentaries/detail/modes-of-transmission-of-virus-causing-covid-19-implications-for-ipc-precaution-recommendations).